

Title (en)
DAMPER ASSEMBLY WITH FREQUENCY ADAPTIVE ORIFICE

Title (de)
DÄMPFERANORDNUNG MIT FREQUENZADAPTIVER ÖFFNUNG

Title (fr)
ENSEMBLE AMORTISSEUR À ORIFICE ADAPTATIF EN FRÉQUENCE

Publication
EP 4246010 A1 20230920 (EN)

Application
EP 23161669 A 20230314

Priority

- CN 202210267856 A 20220318
- US 202217723421 A 20220418

Abstract (en)
A damper assembly includes a housing having a tubular shape defining a main chamber extending along a center axis. A piston is movable along the center axis and divides the main chamber into a compression chamber and a rebound chamber. The piston includes a piston body defining a frequency-adaptive orifice (FAO) passage providing fluid communication between the compression chamber and the rebound chamber. The piston includes an FAO valve assembly having an FAO cover member configured to block fluid flow therethrough in response to application of a low-frequency excitation, and allowing fluid flow through the FAO passage in response to application of a high-frequency excitation. The FAO valve assembly also includes a tappet configured to translate relative to the piston body to bias the FAO cover member to selectively cover the FAO passage in response to the application of the low-frequency excitation.

IPC 8 full level
F16F 9/512 (2006.01)

CPC (source: EP)
F16F 9/512 (2013.01)

Citation (applicant)
US 5706920 A 19980113 - PEES JAMES MITCHELL [US], et al

Citation (search report)

- [XAI] US 2020215864 A1 20200709 - LIZARRAGA SENAR JAVIER [ES]
- [A] US 9534653 B2 20170103 - KIM HONG SIG [KR]
- [A] US 10774895 B2 20200915 - YAN SHI [BE]

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA

Designated validation state (EPC)
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